

ABSTRACT OF THE DISCLOSURE

A vessel (10) designed to operate efficiently as both a catamaran and air cushion vessel can travel at low speed (e.g. Froude number (F_n) = 0-0.3) in a catamaran or displacement mode and at high speed (e.g. Froude numbers (F_n) = 0.3 or more) in an air cushion or dynamically supported mode. The vessel (10) includes molded catamaran hulls (11, 12) with parabolic waterlines, a flexible, air cushion seal system (16, 17), surface piercing propellers (20) and a propulsion system (e.g. combined diesel and gas turbine). There are preferably auxiliary gas turbines for generating lift air pressure. Forward mounted independently stabilizing foils (30), can optionally facilitate ride stabilization and load compensation at high and low speeds. The foils also generate transverse roll forces to improve high speed maneuvering.

15

P:\Seth\98238.6.Pat.App.doc